

Appl. No.: 10/781,979  
Amdt. Dated July 25, 2006  
Reply to Office Action of July 19, 2006

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Amendments to the Claims:

1. (Currently Amended) An isolated nucleic acid molecule selected from the group consisting of:

- a) a nucleic acid molecule comprising the nucleotide sequence of SEQ ID NO:1, 2, 4, or 6;
- b) a nucleic acid molecule comprising a nucleotide sequence having at least 95% sequence identity to the nucleotide sequence of SEQ ID NO:1, 2, 4, or 6, wherein said nucleotide sequence encodes a polypeptide having pesticidal activity;
- c) a nucleic acid molecule which encodes a polypeptide comprising the amino acid sequence of SEQ ID NO:3, 5, or 7;
- d) a nucleic acid molecule comprising a nucleotide sequence encoding a polypeptide having at least 95% amino acid sequence identity to the amino acid sequence of SEQ ID NO:3, 5, or 7, wherein said polypeptide has pesticidal activity; and,
- e) ~~a complement of any of a) d).~~

2. (Currently Amended) An The isolated nucleic acid molecule of claim 1, wherein said nucleotide sequence is a synthetic sequence that has been designed for expression in a plant.

3. (Currently Amended) The nucleic acid molecule of claim 2, wherein said synthetic sequence has an increased GC content relative to the GC content of SEQ ID NO:1, 2, or 4.

4. (Original) A vector comprising the nucleic acid molecule of claim 1.

5. (Original) The vector of claim 4, further comprising a nucleic acid molecule encoding a heterologous polypeptide.

6. (Original) A host cell that contains the vector of claim 4.

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7. (Original) The host cell of claim 6 that is a bacterial host cell.
8. (Original) The host cell of claim 6 that is a plant cell.
9. (Original) A transgenic plant comprising the host cell of claim 8.
10. (Original) The transgenic plant of claim 9, wherein said plant is selected from the group consisting of maize, sorghum, wheat, sunflower, tomato, crucifers, peppers, potato, cotton, rice, soybean, sugarbeet, sugarcane, tobacco, barley, and oilseed rape.
11. (Currently Amended) Transgenic seed of ~~a~~the plant of claim 9.
- 12-18. (Cancelled)
19. (Currently Amended) A method for producing a polypeptide with pesticidal activity, comprising culturing the host cell of claim 6 under conditions in which ~~a~~the nucleic acid molecule encoding the polypeptide is expressed, ~~said polypeptide being selected from the group consisting of:~~
  - ~~a) — a polypeptide comprising the amino acid sequence SEQ ID NO:3, 5, or 7;~~
  - ~~b) — a polypeptide encoded by the nucleotide sequence SEQ ID NO:1, 2, 4, or 6, wherein said polypeptide has pesticidal activity;~~
  - ~~c) — a polypeptide comprising an amino acid sequence having at least 95% sequence identity to the amino acid sequence of SEQ ID NO:3, 5, or 7, wherein said polypeptide has pesticidal activity; and~~
  - ~~d) — a polypeptide that is encoded by a nucleotide sequence that is at least 95% identical to a nucleotide sequence of SEQ ID NO:1, 2, 4, or 6.~~

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20-21. (Canceled)

22. (Currently Amended) A plant having stably incorporated into its genome a DNA construct comprising a nucleotide sequence that encodes a protein having pesticidal activity, wherein said nucleotide sequence is selected from the group consisting of:

- a) ~~a~~the nucleotide sequence of SEQ ID NO:1, 2, or 4;
- b) a nucleotide sequence having at least 95% sequence identity to ~~a~~the nucleotide sequence of SEQ ID NO:1, 2, or 4, wherein said nucleotide sequence encodes a polypeptide having pesticidal activity;
- c) a nucleotide sequence encoding a polypeptide comprising ~~a~~the amino acid sequence of SEQ ID NO:3 or 5; and,
- d) a nucleotide sequence encoding a polypeptide having at least 95% amino acid sequence identity to the amino acid sequence of SEQ ID NO:3 or 5, wherein said polypeptide has pesticidal activity;

wherein said nucleotide sequence is operably linked to a promoter that drives expression of a coding sequence in a plant cell.

23. (Original) The plant of claim 22, wherein said plant further comprises the nucleotide sequence of SEQ ID NO:6.

24. (Currently Amended) A plant cell having stably incorporated into its genome a DNA construct comprising a nucleotide sequence that encodes a protein having pesticidal activity, wherein said nucleotide sequence is selected from the group consisting of:

- a) ~~a~~the nucleotide sequence of SEQ ID NO:1, 2, or 4;
- b) a nucleotide sequence having at least 95% sequence identity to ~~a~~the nucleotide sequence of SEQ ID NO:1, 2, or 4, wherein said nucleotide sequence encodes a polypeptide having pesticidal activity;

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c) a nucleotide sequence encoding a polypeptide comprising ~~an~~the amino acid sequence of SEQ ID NO:3 or 5; and,

d) a nucleotide sequence encoding a polypeptide having at least 95% amino acid sequence identity to the amino acid sequence of SEQ ID NO:3 or 5, wherein said polypeptide has pesticidal activity;  
wherein said nucleotide sequence is operably linked to a promoter that drives expression of a coding sequence in a plant cell.

25. (Original) The plant cell of claim 24, wherein said plant cell further comprises the nucleotide sequence of SEQ ID NO:6.